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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,431	10/16/2001	Michael T. Andreas	MTI-31555	5688

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WHYTE HIRSCHBOECK DUDEK S.C.
111 E. WISCONSIN AVE.
SUITE 2100
MILWAUKEE, WI 53202

EXAMINER

KORNAKOV, MICHAIL

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 07/18/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/981,431

Applicant(s)

ANDREAS, MICHAEL T.

Examiner

Michael Kornakov

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-79 is/are pending in the application.

4a) Of the above claim(s) 8,11-14,21,25,29,38-41,47,48,67-69,74,75,78 and 79 is/are withdrawn from consideration.

- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-7,9,10,15-20,22-24,26-28,30-37,42-46,49-66,70-73,76 and 77 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-79 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 1-79 (Group I) in Paper No. 4 is acknowledged. There is no ARGUMENT ON THIS RECORD and the Applicant has not pointed out wherein either (1) the reasons advanced by the Examiner to establish distinctiveness between the inventions as claimed and grouped or (2) the evidence of separate status, classification and/or search are in error. Therefore the restriction requirement is made **FINAL**.

2. Applicant elected the following species:

antimicrobial agent -sorbic acid and its derivatives;

solvent -water

residual particles - metal particles

The following claims are readable on the elected species:

1-7, 9, 10, 15-20, 22-24, 26-28, 30-37, 42-46, 49-66, 70-73, 76 and 77.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Before the rejections are made, it is noted here that the preamble in composition claims recites a statement of intended use or purpose, and as a rule does not limit the scope of the claim, since the statements in preamble merely define the context in which the invention operates, *DeGeorge v. Bernier*, 226 USPQ 758,761, n.3 (Fed.Cir. 1985).

Likewise the prior art reference disclosing the composition need not disclose a utility to defeat patentability under 35 U.S.C. § 102. *In re Schoenwald*, 964 F. 2d 1122, 1123-1124, 22 USPQ 2d. 1671, 1672-1673 (Fed. Cir. 1992).

It is further noted that by the virtue of the transitional phrase comprising the instantly claimed composition allows the presence of any other major ingredients even in the major amounts.

4. Claims 1-7, 9, 10, 15, 18-20, 22-24, 26-28, 30-37, 42-46, 49-66, 70-73, 76 and 77 are. rejected under 35 U.S.C. 102(b) as being anticipated by Dhillon et al (U.S. 4,912,021).

Dhillon discloses composition containing:

- a. a mono-, di-, or tri-sodium potassium or lithium phosphate; and
- b. benzyl alcohol, phenoxyethanol or phenoxypropanol; and
- c. polyvinyl pyrrolidone, dextrin, poly (methyl vinyl ether/maleic acid) or gum arabic; and
- d. **citric acid or benzoic acid**; and
- e. sodium or potassium octyl sulfate; and
- f. sodium, potassium or lithium benzoate; and
- g. **sodium, potassium or ammonium citrate**; and

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h. sodium, potassium or ammonium sorbate; andi. sufficient water (abstract).

Therefore, Dhillon discloses a composition that contains all ingredients identical to those elected by Applicant. This clearly reads on the limitations of the instant claims 1-7, 9, 10, 18, 19, 20, 22, 23, 28, 30-35, 37. The mixture preferably has a pH which is in the range of from about 5.8 to about 7.8, more preferably from about 6.0 to about 7.0 and most preferably from about 6.3 to about 6.6 . This reads on the limitations of the instant claims 15, 26, 17.

With specific regard to claims reciting the amounts of cleaning agent and antimicrobial agent, it is best reflected in claim 1 of Dhillon col. 6 and 7 : composition contains from about 0.1% to about 10.0% by weight of the composition of one or more acids selected from the group consisting of citric acid and benzoic acid (cleaning agent according to the instant claims) ; and from about 0.2% to about 10.0% by weight of the composition of one or more components selected from the group consisting of sodium, potassium and ammonium citrate (also cleaning agent according to the instant claims) ; from about 1.0% to about 15.0% by weight of the composition of one or more compounds selected from the group consisting of sodium, potassium and lithium benzoate (second antimicrobial agent, according to the instant claims) ; and from about 0.2% to about 15.0% by weight of the composition of one or more components selected from the group consisting of sodium, potassium and ammonium sorbate (antimicrobial agent elected by Applicant); This meets the limitations of the instant claims 42-47, 49-52, 54-66, 70, 72, 73, 76, 77. It is once again emphasized that since the composition of

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Dhillon is identical to that instantly claimed it is fully capable of performing all actions as recited in the instant claims

5. Claims 1-7, 9, 15, 18-20, 22-24, 26, 27, 28-35, 37, 42-47, 49-51, 55-66, 70-72, 76, 77 are rejected under 35 U.S.C. 102(b) as being anticipated by Pregozen (U.S. 5,141,803).

Pregozen discloses an aqueous composition containing (a) 0.02-0.25 wt.% of potassium sorbate; (b) 0.05-0.20 wt.% of citric acid; (c) 0.02-0.20 wt.% of disodium salt of EDTA; (d) 0.03-0.24 wt.% of cationic biocide; and (e) water to 100 wt.%. Composition has pH 3.5-4.5. Major amount of water employed in the composition is deionized water. Relative amounts of ingredients of composition are within the claimed range (abstract, col.2, line 65 through 3, line 9). Composition in Table in col. 6 recites potassium sirbate *antimicrobial gent of the instant claims) , citric acid (cleaning agent of the instant claims) and deionized water in the amounts as instantly claimed. It is once again emphasized that since the claimed compositions are not novel, they are not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in prior art, In re Spada, 911 F 2d 705, 709 15 USPQ 1655, 1658 (Fed. Cir. 1990).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of the above cited references: Dhillon or Pregozen, each one individually in view of Small (U.S. 6,156,661)

Dhillon or Pregozen disclose the composition as instantly claimed, utilizing sorbic acid and its salts as antimicrobial agents and citric acid and its salts as cleaning agents. They do not specifically recite the buffering agents, such as ammonium hydroxide or TMAH.

Small discloses composition for removal of chemical residues from metal or dielectric surfaces or for removal of residues after chemical mechanical polishing of a copper surface, which is an aqueous solution with a pH between about 3.5 and about 7. The composition contains a monofunctional, **difunctional** or trifunctional organic acid and a buffering amount of a quaternary amine, ammonium hydroxide (abstract). One of the preferred compositions contains citric acid, ammonium hydroxide and deionized water (Table VII in col. 11)

Since Dhillon and/or Pregozen are both concerned with maintaining the pH of a composition in a specific range, and Small uses the ammonium hydroxide in a post CMP cleaning solution, a person skilled in the art would have found it obvious to utilize the buffering agent of Small in compositions of Dhillon and/or Pregozen in order to buffer the solution and thus to arrive at the instant claims 16 and 17.

In the alternative, since the cleaning agent of Small is identical to those of Dhillon and Pregozen, and since Small also utilizes formic acid in his cleaning composition

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claims 1 and 11), which is an antimicrobial agent, a person skilled in the art would have found it obvious to utilize both citric acid (cleaning agent) and formic acid (as per Small-antimicrobial agent) or sorbic acid (antimicrobial agent), as taught by Dhillon or Pregozen in combination of ammonium hydroxide of small to maintain the desired pH and thus to arrive at the instant claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kornakov whose telephone number is (703) 305-0400. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (703) 308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872 9310 for regular communications and (703) 872 9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 2450.

M. Kornakov

Michael Kornakov
Examiner
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July 14, 2003